## Fractional Euler Method and Finite Difference Formula Using Conformable Fractional Derivative

Authors : Ramzi B. Albadarneh

**Abstract :** In this paper, we use the new definition of fractional derivative called conformable fractional derivative to derive some finite difference formulas and its error terms which are used to solve fractional differential equations and fractional partial differential equations, also to derive fractional Euler method and its error terms which can be applied to solve fractional differential equations. To provide the contribution of our work some applications on finite difference formulas and Euler Method are given.

**Keywords :** conformable fractional derivative, finite difference formula, fractional derivative, finite difference formula **Conference Title :** ICAMNA 2015 : International Conference on Applied Mathematics and Numerical Analysis

Conference Location : Rome, Italy

Conference Dates : December 03-04, 2015